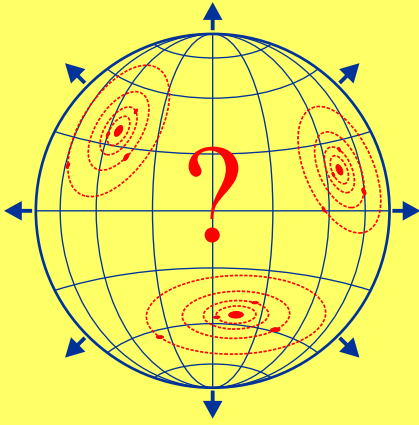


COSMOLOGY ON SMALL SCALES

Local Hubble Expansion and Other Cosmological Puzzles

September 19-21, 2024

*Institute of Mathematics, Czech Academy of Sciences
Prague, Czech Republic & On-line*



Local organizing committee:

- ◆ Prof. Michal Krizek (Chair)
- ◆ Assoc. Prof. Yurii Dumin (Vice-Chair)
- ◆ Hana Bilkova

Deadlines:

- April 30, 2024
– submission of manuscripts for Proceedings
- June 30, 2024
– acceptance of manuscripts to Proceedings
- July 31, 2024
– registration for participation

Venue:

Inst. Math.,
Czech Acad. Sci.
Zitna 25
115 67 Prague 1
Czech Republic

Aims and scope:

The concept of Hubble expansion is a cornerstone of modern cosmology starting from the early days of its development in the 1920's and 30's. However, one of the crucial issues – what is the spatial scale at which the Hubble expansion begins to operate – remains unclear till now. Moreover, this question became especially important in the last 25 years in the context of dark-energy-dominated cosmology: Since the dark energy is distributed perfectly uniformly everywhere, one can expect the cosmological effects even at very small (e.g., inter-planetary) scales. To address the above-mentioned issues, a series of biannual conferences "Cosmology on Small Scales" was organized in 2016. These meetings gather not only specialists in theoretical and observational cosmology, but also mathematicians, geophysicists, planetologists, *etc.* to discuss the problem from various points of view. The upcoming 5th conference CSS 2024 will continue this tradition and is aimed at a presentation of the most recent theoretical ideas and observational findings.

Conference topics:

- ◆ Local Hubble expansion – search for observational and laboratory evidence
- ◆ Cosmological effects in the localized astronomical systems
- ◆ Arguments for and against dark energy, and revisiting the foundations of physics
- ◆ Alternative models for dark matter and dark energy
- ◆ Mathematical aspects of the extrapolations used in cosmology
- ◆ Explanations of various cosmological paradoxes